

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT  
NSPS SOURCE

PERMITTEE

D. Construction, Inc.  
Attn: Mr. Brian Hansen  
1488 South Broadway  
Coal City, Illinois 60416

Application No.: 04010054  
Applicant's Designation: MORRIS1  
Subject: Asphalt Plant  
Date Issued:  
Location: 1281 Leah Road, Morris

I.D. No.: 063060ACX  
Date Received: January 15, 2004  
Expiration Date:

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of a No. 2 fuel oil-fired drum-mix asphalt plant with baghouse, a 1.5 mmBtu/hr No. 2 fuel oil-fired asphalt heater, 2 liquid asphalt storage tanks (20,000-gallons, each), hot mix asphalt silos with truck loadout, and one diesel generator (EM-GEN, 2,250 hp) pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year of carbon monoxide (CO) and 100 tons/year of nitrogen oxides (NO<sub>x</sub>)). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. This asphalt plant is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and I. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. The emissions from the asphalt plant shall not contain particulate matter in excess of 0.04 gr/dscf and shall not exhibit 20% opacity or greater, pursuant to 40 CFR 60.92.
- c. At all times the Permittee shall also maintain and operate the Asphalt Plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11(d).

- 3a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
- b. Asphalt tank heaters associated with the drum-mix asphalt plant which combust liquid fuels are subject to 35 Ill. Adm. Code 212.206, which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period to exceed 0.15 kg of particulate matter per MW-hr of actual heat input from any fuel combustion emission unit using liquid fuel exclusively (0.10 lbs/mmBtu).
- c. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 Ill. Adm. Code 212.301 and 212.314.
- d. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 Ill. Adm. Code 212.321.
- 4a. Asphalt tank heaters associated the asphalt plant which combust liquid fuels are subject to 35 Ill. Adm. Code 214.122(b)(2), which provides that no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).
- b. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2,000 ppm.
- c. Pursuant to 35 Ill. Adm. Code 214.304 the emissions from the burning of fuel at process emission units located in the Chicago major metropolitan areas shall comply with applicable Condition 4(a) (see also 35 Ill. Adm. Code Part 214 Subparts B through F).
- 5. Use of Organic Material. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 8.0 lbs/hr of organic material into the atmosphere from any emission unit. If no odor nuisance exists then this limitation shall only apply to

photochemically reactive material as defined in 35 Ill. Adm. Code 211.4690.

- 6a. The baghouse shall be in operation at all times when the asphalt plant is in operation and emitting air contaminants.
- b. The Permittee shall, in accordance with manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- 7a. Natural gas and distillate fuel oil shall be the only fuel(s) burned for the asphalt plant.
- b. Distillate fuel oil (Grade No. 2) shall be the only fuel burned in the diesel generator.
- c. The Permittee shall not use distillate fuel oil Grades No. 1 and 2) with a sulfur content greater than the larger of the following two values:
  - i. 0.28 weight percent, or
  - ii. The wt. percent given by the formula: Maximum wt. percent sulfur =  $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$ .
- d. Organic liquid by-products or waste materials shall not be used in any fuel combustion emission source without written approval from the Illinois EPA.
- e. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- f. The Permittee shall notify the Illinois EPA prior to any change in the type of fuel used at the source.
- 8. In the event that the operation of this emission unit results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- 9a. Emissions and operation of drum-mix asphalt plant shall not exceed the following limits:
  - i. Asphalt Production Limits:

<u>(Tons/Hour)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
<u>350</u>	<u>88,500</u>	<u>586,300</u>

ii. Emissions from Drum Mixer/Dryer:

<u>Pollutant</u>	Emission Factor		E M I S S I O N S	
	<u>(Lb/Ton)</u>	<u>(Lb/Hr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
CO	0.13	45.50	5.76	38.11
NO <sub>x</sub>	0.055	19.25	2.43	16.12
PM	0.033	11.55	1.46	9.67
SO <sub>2</sub>	0.058	20.30	2.57	17.00
VOM	0.032	11.20	1.41	9.38

iii. Emissions from Asphalt Silo Loading and Truck Loadout:

<u>Pollutant</u>	Emission Factor		E M I S S I O N S	
	<u>(Lb/Ton)</u>	<u>(Lb/Hr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
CO	0.0007	0.25	0.03	0.21
PM	0.0007	0.25	0.03	0.21
VOM	0.0048	1.68	0.21	1.41

iv. These limits are based on maximum asphalt production and standard AP-42 emission factors (Tables 11.1-3, 11.1-7, 11.1-8, and 11.1-14, AP-42, Volume I, Fifth Edition, Update 2001, December 2000).

b. Emissions and operation of the asphalt tank heater shall not exceed the following limits:

i. Maximum firing rate: 1.5 mmBtu/hr

II. Emissions from asphalt heater:

<u>Pollutant</u>	Emission Factor		E M I S S I O N S	
	<u>(Lb/1,000 Gal)</u>	<u>(Lb/Hr)</u>	<u>(Tons/Yr)</u>	
CO	5	0.05	0.23	
NO <sub>x</sub>	20	0.21	0.94	
PM	2	0.02	0.09	
SO <sub>2</sub>	142 S	0.43	1.87	
VOM	0.34	0.01	0.02	

iii. These limits are based on the maximum fuel usage, a heat content for No. 2 distillate fuel oil of 140,000 Btu/gal, 8,760 hours/year of operation, and standard AP-42 emission factors (Tables 1.3-2 and 1.3-3, AP-42, Volume I, Fifth Edition, Supplement E, September 1998). S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

c. This permit is issued based on negligible emissions of volatile organic material (VOM) from 2 liquid asphalt storage tanks. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.

- d. Emissions and operation of the diesel-powered generator shall not exceed the following limits:

- i. Total distillate fuel usage of the diesel-powered generator:

<u>(Gallons/Month)</u>	<u>(Gallons/Year)</u>
<u>22,000</u>	<u>132,000</u>

- ii. Emissions from the diesel-powered generator:

<u>Pollutant</u>	<u>Emission Factor (Lb/1,000 Gal)</u>	<u>E M I S S I O N S</u>	
		<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
CO	0.8500	1.31	7.85
NO <sub>x</sub>	3.2000	4.93	29.67
PM	0.1000	0.15	0.92
SO <sub>2</sub>	0.0505	0.08	0.47
VOM	0.0900	0.14	0.83

- iii. These limits are based on maximum fuel usage and standard AP-42 emission factors (Table 3.4-1, AP-42, Volume I, Fifth Edition, Supplement B, October 1996).

- e. The emissions of hazardous air pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

- f. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

- 10a. Pursuant to 35 Ill. Adm. Code 212.107, 212.109, and 212.110, testing for particulate matter emissions shall be performed as follows:

- i. For both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR Part 60, Appendix A, incorporated by reference in 35 Ill. Adm. Code 212.133, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. This condition shall not apply to 35 Ill. Adm. Code 212.301, pursuant to 35 Ill. Adm. Code 212.107.
- ii. Pursuant to 35 Ill. Adm. Code 212.109, except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the

methods of data reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, incorporated by reference in 35 Ill. Adm. Code 212.113, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.

- iii. Measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm. Code Part 212 shall be conducted in accordance with 40 CFR Part 60, Appendix A, Methods 5, 5A, 5D, or 5E, pursuant to 35 Ill. Adm. Code 212.110(a).
  - iv. The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4, pursuant to 35 Ill. Adm. Code 212.110(b).
  - v. Upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA, pursuant to 35 Ill. Adm. Code 212.110(c).
- b. Testing required by Condition 10(a) shall be performed by a qualified independent testing service.
11. Inspections of the affected drum-mix asphalt plant and control systems equipment and operations shall be performed as necessary but at least once per week when the affected drum-mix asphalt plant is in operation to confirm compliance with the requirements of this permit.
- 12a. The Permittee shall maintain records of the following items for the affected drum-mix asphalt plant to demonstrate compliance with Conditions 2 through 11 of this permit:
- i. The Permittee shall retain all applicable records for the affected drum-mix asphalt plant as specified by 40 CFR 60.7.
  - ii. The owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three

(3) years after the date a test is performed, pursuant to 35 Ill. Adm. Code 212.110(e).

- iii. Records addressing use of good operating practices for the baghouse:
  - A. Operating logs for the affected drum-mix asphalt plant dryer baghouse, including operating data (pressure drop or stack condition), daily upon startup;
  - B. Records for periodic inspection of the baghouse with date, individual performing the inspection, and nature of inspection; and
  - C. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- iv. The Permittee shall maintain records of excess emissions during malfunctions and breakdowns of the baghouse associated with the affected drum-mix asphalt plant dryer. At a minimum, these records shall include:
  - A. Date and duration of malfunction or breakdown;
  - B. A full and detailed explanation of the cause for such emissions;
  - C. The contaminants emitted and an estimate of the quantity of emissions;
  - D. The measures used to reduce the quantity of emissions and the duration of the occurrence; and
  - E. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity.
- v. Fuel Usage Records:
  - A. Total fuel oil usage for the drum-mix/dryer and asphalt tank heaters (gallons/month and gallons/year) and type of fuel oil used;
  - B. Distillate fuel oil usage for the diesel-powered generator (gallons/month and gallons/year); and
  - C. The Permittee shall keep certifications of the sulfur content of the fuel oil provided by the supplier. This record shall be updated whenever the supplier or grade of fuel oil changes.

- vi. Asphalt concrete production for each fuel type (tons/month and tons/year);
  - vii. Annual and monthly CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, and VOM emissions from the affected drum-mix asphalt plant shall be maintained, based on asphalt production, fuel consumption, and the applicable emission factors, with supporting calculations.
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
- 13a. The Permittee shall submit all applicable reports for the affected drum-mix asphalt plant as specified in 40 CFR 60.7 and 60.19.
- b. A person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used, pursuant to 35 Ill. Adm. Code 212.110(d).
- c. The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected drum-mix asphalt plant with the permit requirements as follows. Reports shall include the probable cause of such deviations and any corrective actions or preventive measures taken:
- i. Emissions of CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, and/or VOM, in excess of the limit specified in Condition 9 within 30 days of a record showing such an occurrence.
  - ii. Continued operation of the affected drum-mix asphalt plant with a defect in a baghouse that may result in emissions of particulate matter in excess of limits in Conditions 2(b), 3(a), 3(d), or 9(a)(ii) within 30 days of such an occurrence.
  - iii. The use of fuel oil with a sulfur content in excess of the limit specified in Condition 7(c) with the length of time this fuel was used and the effect on emissions of SO<sub>2</sub> within 30 days of this violation being detected.
- d. The Permittee shall provide the following notification and reports to the Illinois EPA, Compliance Section and Regional Field Office, pursuant to 35 Ill. Adm. Code 201.263, concerning continued operation



of the affected drum-mix asphalt plant during malfunction or breakdown of the affected drum-mix asphalt plant with excess emissions.

- i. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) days, upon the occurrence of noncompliance due to malfunction or breakdown.
  - ii. Upon conclusion of the incident, the Permittee shall give a written follow-up notice to the Illinois EPA, Compliance Section and Regional Field Office, providing a detailed explanation of the event, an explanation why continued operation of the affected drum-mix asphalt plant was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or when the affected drum-mix asphalt plant was taken out of service.
- d. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
- i. Illinois EPA - Air Compliance Section  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276
  - ii. Illinois EPA - Air Regional Field Office  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control - Region 1  
9511 West Harrison  
Des Plaines, Illinois 60016
  - iii. Illinois EPA - Air Permit Section  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC11)  
P.O. Box 19506  
Springfield, Illinois 62794-9506
  - iv. USEPA Region 5 - Air Branch  
  
USEPA (AE -17J)  
Air & Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604

- e. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.
- 14a. This permit will expire on the day operation ceases at this location, and all emission units are moved to a new location.
- b. The transportation and reassembly of a portable plant at a new location requires a new construction and operating permit pursuant to 35 Ill. Adm. Code 201.142 and 201.143. This permit must be obtained prior to reassembling the plant at the new location. The Permittee shall withdraw this facility once all permitted activities have been relocated or removed.
- c. The Illinois EPA is to be notified, in writing, within five (5) days of any relocation of the moveable processing equipment, covered by this permit, to another permitted location.

If you have any questions on this, please call Randy Solomon at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

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cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the asphalt plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is producing 586,300 tons/year of asphalt. The resulting maximum emissions are below the levels, e.g., 100 tons/year of CO and 100 tons/year of NO<sub>x</sub> at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Item of Equipment</u>	<u>Annual Emissions (Tons/Year)</u>				
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>
Drum Mixer/Dryer	38.11	16.12	9.67	17.00	9.38
Asphalt Silos and Truck Loadout	0.21	-----	0.21	-----	1.41
Asphalt Heaters and Boilers	0.23	0.94	0.09	1.87	0.02
2 Storage Tanks	-----	-----	-----	-----	0.88
Generator	<u>7.85</u>	<u>29.57</u>	<u>0.92</u>	<u>0.47</u>	<u>0.83</u>
Totals:	46.40	46.63	10.89	19.34	12.52

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